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AMENDMENTS TO THE CLAIMS

Claims 1-10 (Canceled).

11. (New) A method of lining a materials transfer chute with a renewable wear

surface adapted to mitigate wear caused by the conveyance of a flowable bulk particulate

material in a flowing stream of material through the chute, the method comprising the steps

of:

determining, for the chute, the flow characteristics desired of the flowing stream of

material in use;

locating, during the design and construction of the chute, a plurality of cascade

formations that extend transversely across the interior of the chute, each cascade formation

including a transversely extending tray that projects into the flow path of the material to be

conveyed through the chute to define a surface facing the incoming stream of material,

which surface is adapted to support a predetermined quantity of the material in use;

arranging the cascade formations to define, co-operatively between each tray and

the tray upstream thereof, a dead box that extends transversely across the interior of the

chute and in which the material supported on the tray surface may accumulate;

dimensioning the cascade formations such that the free edges of the trays are co-

extensive with imaginary lines of curvature that connect the free edges of the trays and that

extend along the intended flow path of the material to be conveyed through the chute;

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locating the cascade formations such that the dead boxes accumulate, in use, no

more of the material conveyed through the chute than is sufficient to form a renewable

wear surface made up of accumulated material upon which conveyed material impinges in

moving through the chute, the trays and the material accumulated thereon being adapted,

in use, to form a composite dead box, the surface of which constitutes a wear surface that

is co-extensive with the imaginary lines of curvature; and

adjusting and permanently settling, during the design and construction of the chute,

the shape and size of successive cascade formations located along the intended flow path

of the material to be conveyed through the chute, in dependence on the desired flow

characteristics of the flowing stream of material through the chute in use.

12. (New) The method according to claim 11 in which the step of locating the

cascade formations within the chute comprises the specific steps of providing the free

edges of at least some of the trays with an upstanding wear lip that extends at least

partially along the free edge of the tray, such that the wear lips are co-extensive with

imaginary lines of curvature connecting the free edges of the trays and such that the dead

boxes accumulate no more of the material conveyed through the chute than is sufficient to

form, in predetermined areas of the chute, a lining of accumulated material upon which

conveyed material impinges in moving through the chute to the extent that no more than

parts of the wear lips are exposed to the bulk material flowing through the chute.

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13. (New) The method according to either of claims 11 or 22 in which, during the

design and construction of the chute, the chute is separated into one or more of a receiving

section, a main chute body and a load-out section, each of which is adapted, singly or in

combination, to form a wear surface in use which wear surface is adapted to modify the

vertical and horizontal components of motion of the stream of material in at least part of its

passage into, through or out of the receiving section, the main chute body and the load-out

section.

14. (New) The method according to claim 13 which includes the specific steps,

during the design and construction of a chute adapted to deposit the flowing stream of

material on a receiving belt, of adapting the load-out section to form a wear surface in use,

which wear surface is adapted to modify the vertical and horizontal components of motion

of the flowing stream of material discharging from the load-out section at least partially to

match one or more of the receiving belt travel direction and velocity.

15. (New) A materials transfer chute with a renewable wear surface adapted to

mitigate wear caused by the conveyance of a flowable bulk particulate material in a flowing

stream of material through the chute, the chute comprising:

a plurality of cascade formations that extend transversely across the interior of the

chute, each cascade formation including a transversely extending tray that projects into the

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flow path of the material to be conveyed through the chute to define a surface facing the

incoming stream of material, which surface is adapted to support a predetermined quantity

of the material in use;

the cascade formations being arranged to define, co-operatively between each tray

and the tray upstream thereof, a dead box that extends transversely across the interior of

the chute and in which the material supported on the tray surface may accumulate;

the cascade formations being dimensioned such that the free edges of the trays are

co-extensive with imaginary lines of curvature that connect the free edges of the trays and

that extend along the intended flow path of the material to be conveyed through the chute;

the cascade formations being located such that the dead boxes accumulate, in use,

no more of the material conveyed through the chute than is sufficient to form a renewable

wear surface made up of accumulated material upon which conveyed material impinges in

moving through the chute, the trays and the material accumulated thereon being adapted,

in use, to form a composite dead box, the surface of which constitutes a wear surface that

is co-extensive with the imaginary lines of curvature; and

the shape and size of successive cascade formations located along the intended

flow path of the material to be conveyed through the chute being permanently set, during

the design and construction of the chute, in dependence on the desired flow characteristics

of the flowing stream of material through the chute in use.

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16. (New) The chute according to claim 15 in which the free edges of at least

some of the trays are provided with an upstanding wear lip that extends at least partially

along the free edge of the tray such that the wear lips are co-extensive with imaginary lines

of curvature connecting the free edges of the trays and such that the dead boxes

accumulate no more of the material conveyed through the chute than is sufficient to form, in

predetermined areas of the chute, a lining of accumulated material upon which conveyed

material impinges in moving through the chute to the extent that no more than parts of the

wear lips are exposed to the bulk material flowing through the chute.

17. (New) The chute according to either of claims 15 or 16 which is separated into

one or more of a receiving section, a main chute body and a load-out section, each of

which is adapted, singly or in combination, to form a wear surface in use, which wear

surface is adapted to modify the vertical and horizontal components of motion of the stream

of material in at least part of its passage into, through or out of the receiving section, the

main chute body and the load-out section.

18. (New) The chute according to claim 17, which is adapted to deposit the

flowing stream of material on a receiving belt, the load-out section of the chute being

adapted to form a wear surface in use, which wear surface is adapted to modify the vertical

and horizontal components of motion of the flowing stream of material discharging from the

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load-out section at least partially to match one or more of the receiving belt travel direction and velocity.

- 19. The method according to claim 11, wherein each of said plurality of cascade formations are continuous trays that extend transversely across the interior of the chute.
- 20. The chute according to claim 15, wherein each of said plurality of cascade formations are continuous trays that extend transversely across the interior of the chute.